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ABSTRACT

A comprehensive three-part examination of student mobility among the 19 community colleges and 6 state universities in Kansas was conducted in 1984. The study involved coordinated analyses of student databases at the universities to determine selected demographic and academic characteristics of transfer students for 10 semesters from fall 1979 through spring 1984; a survey of former community college students enrolled in these universities in fall 1984; and a retrospective, longitudinal examination of selected groups of native university and community college transfer students. Study findings included the following: (1) enrollment of community college transfers in state universities increased 72% over the 5-year period; (2) community college transfers were slightly younger, earned somewhat higher achievement test scores, and took heavier loads in fall 1983 than in fall 1979; (3) increasing numbers of transfer-oriented students enrolled in community colleges, and greater percentages of community college students subsequently transferred; (4) students were satisfied with the preparation for university work provided by the community colleges and had no major difficulties in transferring; (5) overall, the academic performance of native university students and community college transfers was substantially the same; and (6) native students earned degrees and persisted at rates considerably higher than community college transfers. The study report provides an extensive description of the process of designing and implementing complicated research analyses at the state level by collaborative efforts, and the survey instrument. (LAL)

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STUDENT MOBILITY AMONG PUBLIC COMMUNITY COLLEGES AND UNIVERSITIES IN THE STATE OF KANSAS

by

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STUDENT MOBILITY AMONG THE PUBLIC COMMUNITY COLLEGES AND UNIVERSITIES IN THE STATE OF KANSAS

Abstract

A comprehensive three part examination of student mobility among the nineteen community colleges and six state universities in the State of Kansas is described. Coordinated analyses of the student data bases at the six universities and surveys administered to former community college students enrolled in these universities provide the principal results, including demographic profiles of transfer students; comparison of the academic performance, progress, graduation and persistence of community college transfer and native university students ; and student perceptions of their experiences at both institutions. The process of achieving consensus for, designing and implementing complicated research analyses at the state level by collaborative efforts is described, and the benefits of this project, and its continuation, are discussed.

Introduction

In a previous paper presented to this organization (May, 1984), the authors detailed the initial cooperative research efforts of the University of Kansas and Johnson County Community College. The circumstances of the two institutions were described, and their motivation for engaging in such research was identified as their perceived mutual self-interest -- described by de Tocqueville as "self-interest correctly understood." The most significant result of these research efforts was also identified as the instigation of cooperative efforts in other areas, including joint curriculum and facilities planning and joint marketing efforts.

The cooperative research efforts of these two institutions had another important result -- the initiation of cooperative statewide research on student mobility among the 19 community colleges and the 6 state universities in Kansas. It is the purpose of this paper to describe this latest research and to discuss both the contingencies of conducting the statewide research project and the implications of the actual results of the study.

Initiation and Sponsorship

In the fall of 1983, the presidents of the Kansas community colleges proposed to sponsor research on community college transfer students, specifically on their performance at the state universities in Kansas. Their motivation was apparently to seize the initiative in pending discussions of the future of public

higher education in Kansas among the state legislature and the various governing bodies and agencies concerned with higher education in the state.

After first considering the use of external consultants, the presidents found in the University of Kansas-Johnson County Community College joint research project a model for the proposed research. Subsequently, they commissioned the Office of Institutional Research at Johnson County Community College to coordinate a statewide study of community college transfer students and suggested extending the previous research on JCCC transfers at the University of Kansas to all community colleges and state universities in the state. As well, each community college contributed to a research fund to be used to support such research.

In order to achieve the administrative mandate necessary to conduct the research project at the six state universities (where the majority of the research effort would, due to the nature of the research, necessarily be conducted), the principal researcher at the University of Kansas arranged for that institution's chief academic officer to sponsor the project to the Council of Chief Academic Officers of the six Kansas Regents universities. The council agreed to sponsor the project, and thereby consolidated the administrative mandate for all 25 public institutions of higher education in Kansas to cooperate in the conduct of this statewide study of students who transfer or move among them.

In this case, it is evident that the prior cooperation between the University of Kansas and Johnson County Community

College was responsible for securing the mandate required to conduct a major research project involving 25 institutions. The principal researchers at both institutions and their immediate supervisors in the academic administrations of both institutions had already developed a stake in such research, and they were able to and motivated to provide the leadership required to secure the necessary cooperation to extend the research statewide -- without which the research could not have been accomplished. The process that led to the development of this consensus to conduct a statewide study of community college transfers in Kansas is depicted in Figure 1.

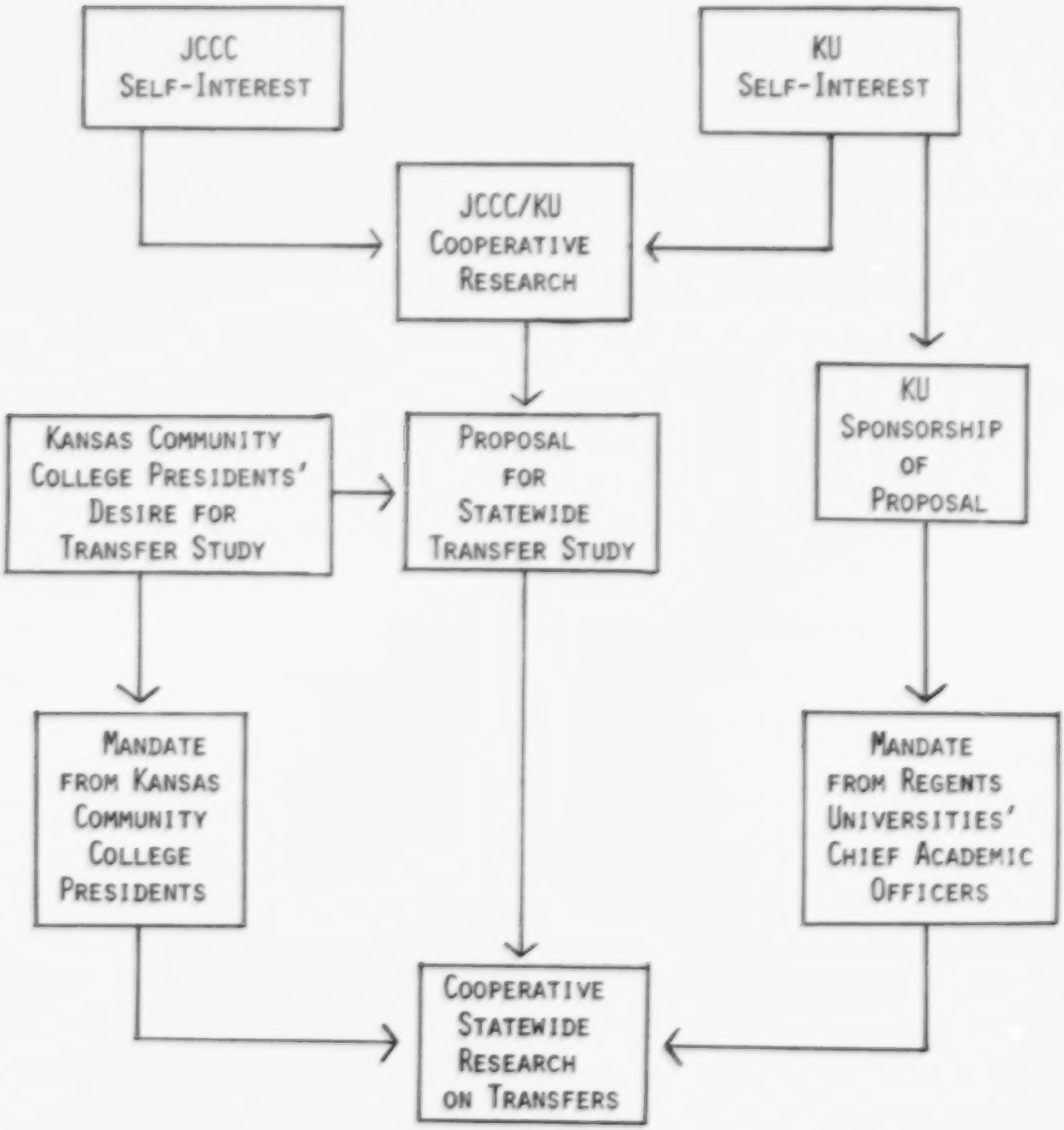
It is important to note, however, that the mandate to conduct this study was secured voluntarily from the administration of each institution in the state. The research was not conducted at the dictate of some external agency with control over the institutions, such as a state legislature or governing board, and this fact made the project a truly collegial effort, with all of the advantages and the disadvantages that characterize such collegial efforts.

Collaborative Design

Perhaps the most complicated aspect of cooperative research are the negotiations that lead to a research design that is compatible with the interests and capabilities of all of the researchers and institutions involved. In this case, design compatibility needed to be accomplished among seven researchers

Figure 1

DEVELOPMENT OF CONSENSUS TO CONDUCT
STATEWIDE RESEARCH ON COMMUNITY COLLEGE TRANSFERS



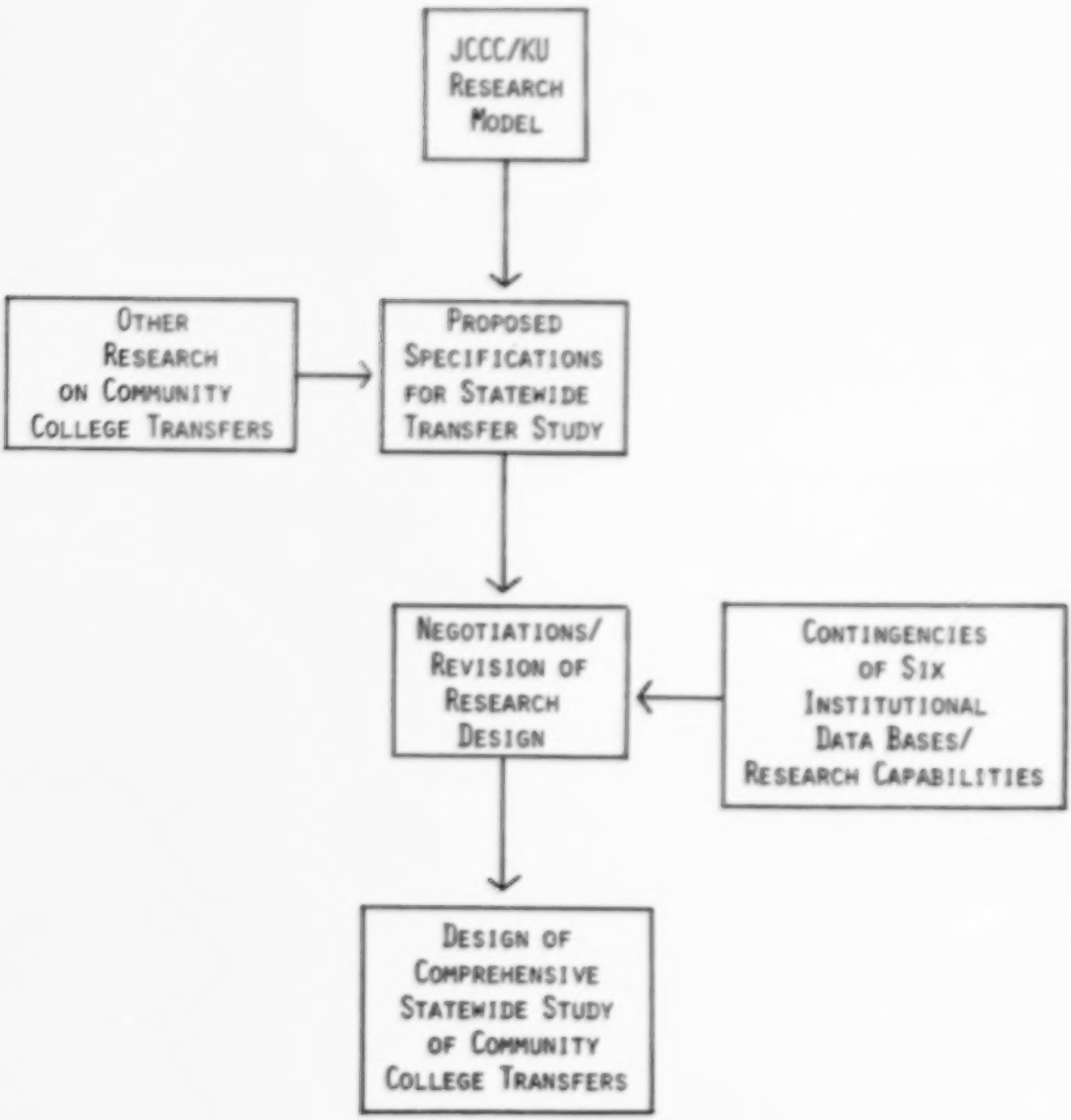
and 25 colleges and universities -- the directors of institutional research/planning at the six state universities representing their respective institutions and the director of institutional research at Johnson County Community College representing the 19 community colleges.

The forum in which the design of this statewide study of community college transfer students was established became the Council of Institutional Research Officers (CIRO), made up of researchers from each of the Regents universities, with the representative of the community colleges attending. A preliminary proposal for the research was developed based upon the previous research conducted by the University of Kansas and Johnson County Community College and upon previously published research on community college transfers. This was presented to CIRO as a draft proposal, subject to modifications and redesign that might be necessitated by the practical requirements and contingencies of any of the participating institutions. This design process is displayed in Figure 2.

It is also important to note that the proposed design carefully attempted to share the burden of the research as equitably as possible among the participating institutions. For example, because much of the principal investigation was to be conducted by examining the student data bases at the state universities, the primary burden of the research necessarily fell upon the researchers at these institutions -- even though the study itself was initiated by the community colleges. The design included a major survey of community college transfers enrolled

Figure 2

DESIGN PROCESS FOR STATEWIDE
RESEARCH ON COMMUNITY COLLEGE TRANSFERS


JCCC/KU Research Model
Other Research on Community College Transfers
Proposed Specifications for Statewide Transfer Study
Negotiations/ Revision of Research Design
Contingencies of Six Institutional Data Bases/ Research Capabilities
Design of Comprehensive Statewide Study of Community College Transfers

at the state universities that was to be the major undertaking of the community college representative, yet the survey was included in the overall research design at least as much in order to balance the perceived burden of the research as to increase the comprehensiveness of the study. As previously noted, the community college presidents had set aside some funds to support the research, and these were made available to the offices of institutional research at the state universities. These funds were clearly insufficient to underwrite the actual costs of the research, but they were important as tangible evidence of good faith and willingness of the community colleges to share the burden of the research. The importance of catering to this perception of mutual effort and of equitable sharing of the cost and work of the project can not be overestimated in conducting cooperative research. The tasks and responsibilities of the study are identified in Figure 3.

As might have been expected, most of the modifications made in the originally proposed research design were related to data definitions and differences in the student information data bases at the six state universities. In fact, it is clear that these two issues must be dealt with by researchers involved in any inter-institutional project. The advantage of the compromises that are forced in data definitions by inter-institutional research is principally that of simplicity: differences in data definitions must be minimized by establishing common data elements and definitions that can be implemented at all participating institutions. The disadvantage of the compromises

Figure 3

STUDY TASKS AND RESPONSIBILITIES

PART I

Task		Responsibility
• Design specifications	--	JCCC/CIRO
• Generate reports	--	IR offices at state universities
• Synthesize reports	--	JCCC

PART II

Task		Responsibility
• Design survey	--	JCCC/CIRO
• Generate samples and mailing lists	--	IF offices at state universities
• Produce surveys	--	JCCC
• Administer surveys	--	JCCC
• Enter and analyze data/responses	--	JCCC
• Synthesize results	--	JCCC

PART III

Task		Responsibility
• Design specifications	--	JCCC/CIRO
• Generate reports	--	IR offices (at KU & WSU)
• Synthesize	--	JCCC

FINAL REPORT

Task		Responsibility
• Draft report	--	JCCC
• Revise, develop consensus report	--	JCCC/CIRO
• Produce/print report	--	JCCC

made in such research is that most-common-denominator designs must invariably minimize the differences among institutions that, in some cases, may be either significant or otherwise quite important. Both of these generalizations about the advantages and disadvantages of design by committee and compromise were illustrated and confirmed in this study.

The definition of a "transfer student" that was ultimately used in the study illustrates both the advantages and disadvantages of research design by collegial process. As the literature and experience make quite clear, exactly who should be counted as a transfer student is, at best, ambiguous. The multiplicity of student attendance patterns and increased student mobility have made any attempt to define transfer students in terms of the traditional pattern of two years of full-time study in the comunity college immediately followed by two years of full-time study in the university futile. However, the absence of any traditional definition provided an unacceptably large number of alternatives that required arbitrary decisions of how many credit hours a student must actually transfer to a university to be counted as a transfer, how recent must the student's community college experience have been, how many institutions can the student have attended, and other such questions with no commonly accepted criteria to provide answers. In this study, the definition that was agreed upon by the research group was the essence of both simplicity and over-simplification:

> any student enrolled in a state university who listed a Kansas community college as the "institution last attended" on admissions/ registration material.

The advantage of so simple a definition for the most critical operational term of the study was that it avoided arbitrary determinations concerning tranfer students' academic experiences. Yet the more important advantage, and the reason for which the definition was adopted by the the consensus of the group, was that it was operational for all six state universities' student data bases.

Nonetheless, there were considerable disadvantages associated with the use of so generalized a definition. The primary problem was treating all students who identified a Kansas community college as the last institution attended the same, including students who may have only attended a single course as high school, summer session or part-time evening students prior to university attendance, as well as students with substantial full-time community college experiences. As a result, the study counted students who would not be considered traditional community college transfers. On the other hand, the definition excluded students who may have had considerable community college experience but who had intervening experience at another college or university. So, the definition resulted in a rather heterogenous group of students that made generalizing about community college "transfer students" hazardous at best. However, it was the expressed consensus of the research group that, overall, the inclusion of some questionable community college transfer students was balanced by the exclusion of

legitimate transfer students. As a concession to some in the group, it was agreed that the final report of the study would not refer to the students identified in the study as "transfer students" because of the traditional attendance pattern implied by the term. As a result, the study report referred to "former Kansas community college students" and was entitled, "Student Mobility Among the Public Community Colleges and State Universities in the State of Kansas. Also, at least one institution was motivated to examine subsets of this large group of students to determine if "high school only," "summer session only," and "normal/traditional" transfers differed from one another in any important respect.

The design ultimately implemented by CIRO and the representative of the community colleges reflected numerous compromises and simplifications such as this one. These were simultaneously the strength and the weakness of the study, and these are necessarily characteristic of all such cooperative research projects. The design is described in the following section.

Design and Methodology

This study of former Kansas community college students who subsequently enrolled in one of the state universities in Kansas was conducted in three parts and designed to answer the following research questions:

Part One:

1. How many students move from the Kansas community colleges to the state universities and how has this number changed in the last five years?

2. What are the characteristics of these students and have they changed?

Part Two:

3. How do these students evaluate their experiences at both the community colleges and state universities? Were they satisfied? What problems, if any, did they encounter?

Part Three:

4. How well do former community college students perform academically at the state universities, particularly in comparison to "native" university students?

The methodology developed to answer these questions employed both quantitative analysis and survey research techniques. These were implemented cooperatively by the seven participating institutions as follows.

Part One: Each state university identified all enrolled students who had indicated that a Kansas community college was the last educational institution that they had attended prior to enrolling in the university and then generated from the student data bases reports of selected demographic and academic characteristics for these students for ten semesters from fall, 1979 through spring, 1984. These characteristics included the following: sex, age, ethnic/racial category, level, university college/school, transfer credit hours, composite ACT scores,

credit hours completed at the university, and university grade point average. Each state university attempted to generate reports in a common format, generally relying on standard statistical packages such as SPSS and SAS for crosstabs and other statistical reports.

Part Two: Each state university identified all former Kansas community college students enrolled in fall, 1984. Random samples of twenty percent of these students were drawn at the three larger universities, and total populations were selected for the three smaller universities. A survey asking these students to evaluate their experiences at both the community colleges and the state universities that they had attended was then mailed to each student selected for the study. A follow-up survey was then conducted using standard survey research techniques. This survey is included as an appendix to this paper.

Part Three: The final part of the study was a retrospective, longitudinal examination of selected groups of both native university and Kansas community college transfer students. Four groups of students were selected, followed for up to eight semesters subsequent to selection, and their comparative academic performance, progress, graduation rates and persistence calculated.

Two pairs of groups of native university students (those who had not previously attended another college or university) and transfer students (who had most recently attended a Kansas community college) were selected at comparable points in their

academic careers. The two pairs of study groups were defined as follows:

> **Native University 1:** A student enrolled for 12 or more credit hours during the fall of 1980, listing a Kansas high school as institution last attended, having transferred zero credit hours from another college or university, and having completed 24-36 credit hours at the university of residence.
>
> **Community College Transfer 1:** A student enrolled for 12 or more credit hours during the fall of 1980, listing a Kansas community college as institution last attended, and having transferred a total of 24-36 credit hours to the university of residence.
>
> and
>
> **Native University 2:** A student enrolled for 12 or more credit hours during the fall of 1981, listing a Kansas high school as institution last attended, having transferred zero credit hours from another college or university, and having completed 54-66 credit hours at the university of residence.
>
> **Community College Transfer 2:** A student enrolled for 12 or more credit hours during the fall of 1981, listing a Kansas community college as institution last attended, and having transferred a total of 54-66 credit hours to the university of residence.

The native university 1 and community college transfer 1 groups were selected in the fall of 1980 and followed each succeeding fall and spring semester through spring, 1984; the native university 2 and community college transfer 2 groups were selected in the fall of 1981 and followed each succeeding semester through spring, 1984.

Students selected within each group were followed through the equivalent of what would be considered their fifth academic year of college study. Each group's average academic progress, as measured by the mean cumulative grade point average of the group; performance, as measured by average cumulative credit

hours earned toward a degree by the group; graduation rate, as measured by the percent of the original group earning degrees; and persistence, as measured by the percent of the original group either still enrolled or graduated were calculated. Comparisons were then made between the paired groups of native university and community college transfer students on these performance criteria.

Results of the Study

The data generated by the study were enormous, and the results could have been disaggregated for each participating institution and by any combination of the numerous variables. However, the results determined to be of primary interest were those that could be generalized about community college transfers statewide, not those for any particular institution or characteristic.

The conclusions that could be drawn from the study were qualified by the limitations of the data upon which they were based. Specifically, not all of the state universities participated in all three parts of the study. Only two of the six were able to complete part three, and while all six provided data for part one, data were not available for all of the student characteristics for all semesters included in the study for all institutions. In addition, improvements in data reporting capabilities and data base maintenance at several of the universities caused additional caution concerning the results of the study. It was suspected that some of the comparative

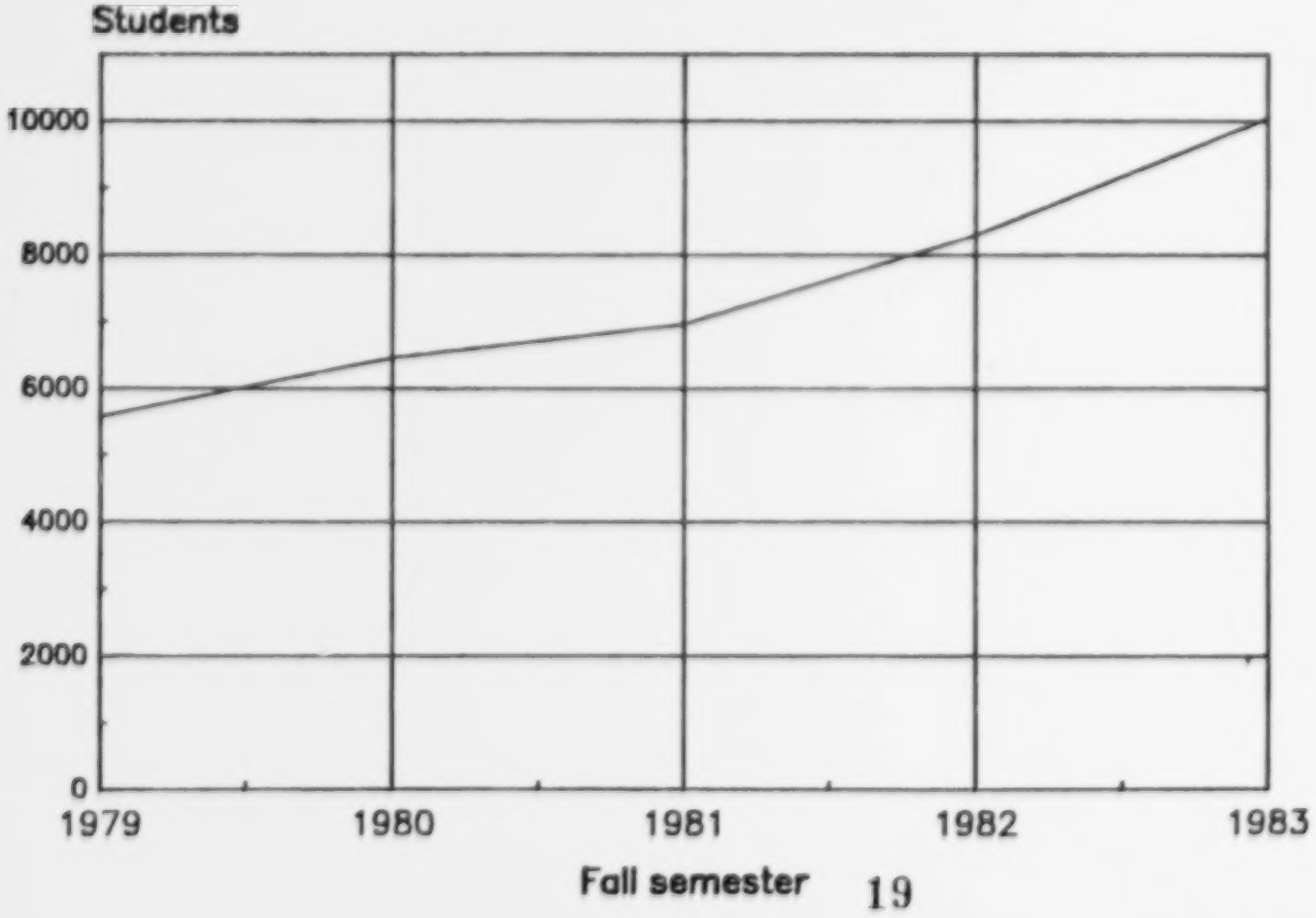
differences between fall, 1979 data and fall, 1983 data could be attributed simply to improvements in the data itself -- rather than to actual changes in the characteristics of the students reflected in the data. Some evidence supporting this suspicion appeared in the data.

In nearly all cases, the limitations of the data were the result of dissimilarities among and changes in the student data bases during the time period encompassed by the study. Such difficulties seem almost inherent in studies involving numerous autonomous institutions. Yet, these caveats aside, the following conclusions about former community college students enrolled in the state universities of Kansas were generalized from the data. The overall results of each of the three parts of the study are provided, and more detailed results can be obtained by request from the authors.

Part One: A major finding of part one of the study was that the number of community college students continuing their higher education at state universities in Kansas was determined to be large and to have grown substantially in the past several years. Figure 4 displays this trend. Enrollment of community college transfers in the state universities increased 72 percent in the five year period examined by the study, while community college enrollments increased only 23 percent. Over 10,000 of these transfers were found to have comprised approximately 17 percent of the undergraduate enrollments in the state university in the fall of 1983.

Figure 4

Total Number of Former Kansas Community College Students Enrolled at State Universities in Kansas, Fall 1979–83



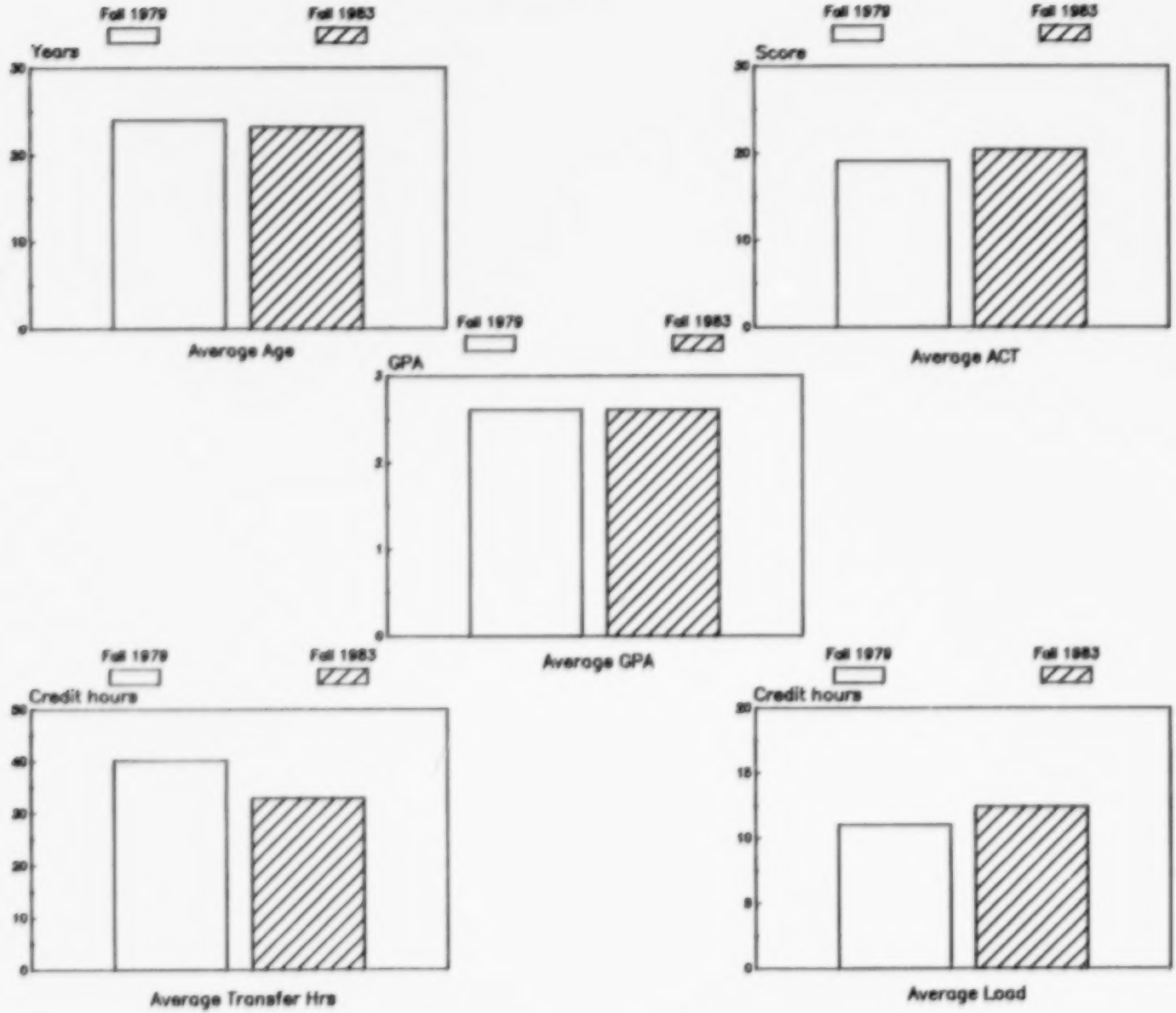
Also, available data suggested that students moving from the Kansas community colleges to the state universities were slightly younger, earned somewhat higher ACT scores and took heavier loads at the university in fall, 1983 than in fall, 1979. Yet the overall magnitude of these changes was small, and the overall trends were not necessarily supported by data at each participating institution. See Figure 5.

The data also suggested that increasing numbers of students with apparent intentions to enroll in state universities began their college careers at a Kansas community college and that greater percentages of community college students subsequently enrolled in state universities. Data obtained for one of the state universities indicated that the fact that former Kansas community college students were younger, scored higher on ACT tests, completed fewer credit hours at the community college and took heavier loads at the state university may have been influenced by a substantial increase in the number of self-identified, university-affiliated students taking a limited number of courses at the community college during summer sessions and in high school prior to university attendance in order to accelerate their progress toward a bachelor's degree. Again, limitations previously noted concerning the data may also have influenced these trends identified as the results of part one of the study.

Part Two: Responses were received from 1,447 of the 3,694 students surveyed using the "Kansas Community College/University Student Follow-Up," for a response rate of approximately 40

Figure 5

CHANGES IN SELECTED CHARACTERISTICS



percent. Overall, students indicated that they were quite satisfied with most specific aspects of their community college and university experiences. Former community college and currently enrolled state university students indicated that they were not dissatisfied with any of the 23 aspects of the institutions identified on the survey. They were explicitly "satisfied" with 70 percent of these, ranging from "quality of instruction" to "on-campus housing." Students' satisfaction ratings of selected aspects of both community colleges and state universities tended to reflect the differences in the two types of institutions -- the more specific focus on teaching of the smaller community colleges and the greater variety and diversity of services provided by the larger state universities.

Students were also generally quite satisfied with the overall preparation for the university provided by the community colleges and the overall preparation provided by the state universities for careers and/or graduate school. The large majority indicated that they would attend both the community colleges and the state universities that they had originally chosen to attend if they were to begin their college careers over again. Table 1 and Figures 6 and 7 summarize some of these survey results.

Students did not report having any major or unusual difficulties transferring from a Kansas community college to a Kansas state university. Some indicated having some difficulty with such common transitional experiences as "locating necessary university services," "getting good academic advising," and

Table 1

AVERAGE SATISFACTION RATINGS[1] OF SELECTED CHARACTERISTICS OF INSTITUTIONS ATTENDED BY FORMER KANSAS COMMUNITY COLLEGE STUDENTS AND CURRENTLY ENROLLED STATE UNIVERSITY STUDENTS, FALL 1984

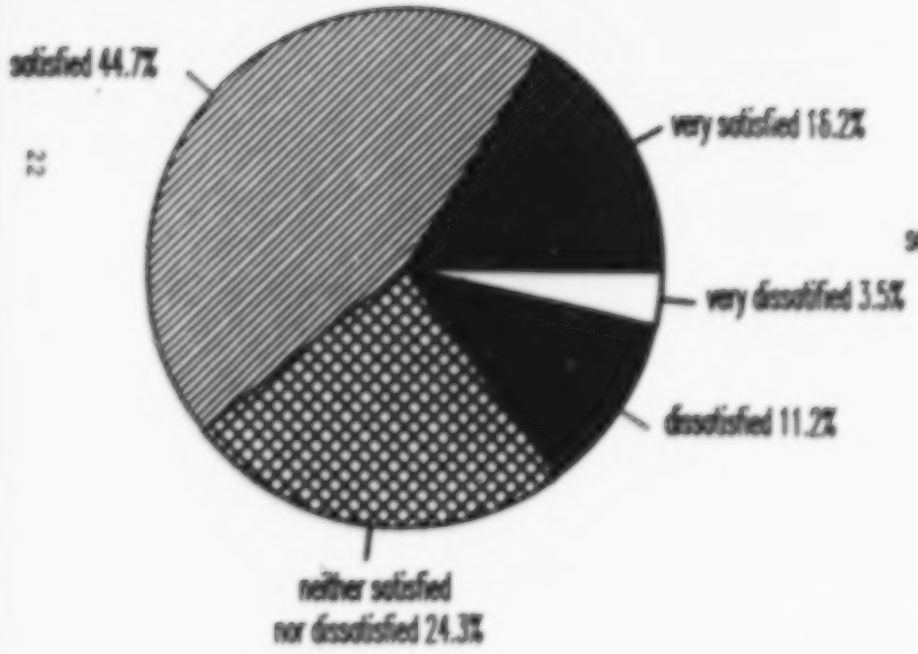
	Satisfaction Ratings[1] of Kansas Community Colleges	Satisfaction Ratings[1] of State Universities
Characteristics:		
Quality of instruction	3.91	3.85
Variety of courses	3.68	4.22
Rigor of instruction	3.51	3.81
Qualifications of faculty	3.87	3.98
Helpfulness of faculty	4.18	3.68
Library services	3.80	4.11
Facilities	3.86	4.13
Equipment	3.76	3.97
Student activities	3.39	3.99
Size and atmosphere	4.07	3.99
Social life	3.67	3.97
Experiences with students	3.95	4.03
Academic advising	3.50	3.36
Job placement	3.28	3.39
Counseling services	3.49	3.40
Registration process	3.75	3.33
Availability of financial aid	3.71	3.16
Classes scheduled conveniently	3.96	3.47
Helpfulness of support staff	3.98	3.68
Food service	3.22	3.12
Bookstore services	3.51	3.69
Health services	3.32	3.89
On campus housing	3.41	3.66

Note: 1. Students rated their satisfaction with selected aspects of the institutions that they attended on a scale from 1 to 5 (1 = "very dissatisfied;" 5 = "very satisfied"). Average satisfaction ratings reported in this table should be interpreted as follows:

0.00 - 1.49 = very dissatisfied
1.50 - 2.49 = dissatisfied
2.50 - 3.49 = neither satisfied nor dissatisfied
3.50 - 4.49 = satisfied
4.50 - 5.00 = very satisfied

Figure 6

COMMUNITY COLLEGE PREPARATION FOR UNIVERSITY



STATE UNIVERSITY PREPARATION FOR CAREER OR GRADUATE SCHOOL

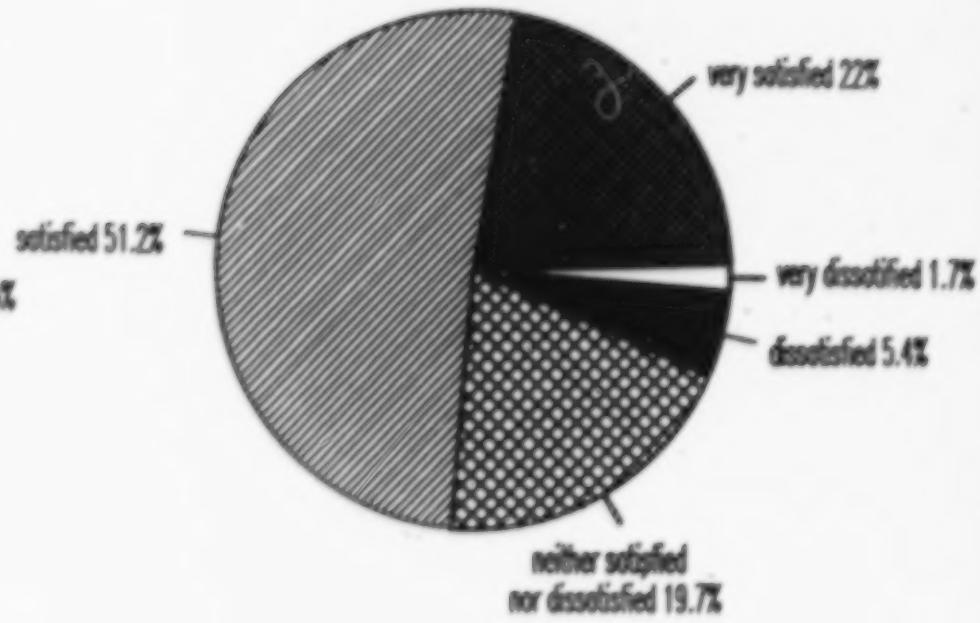
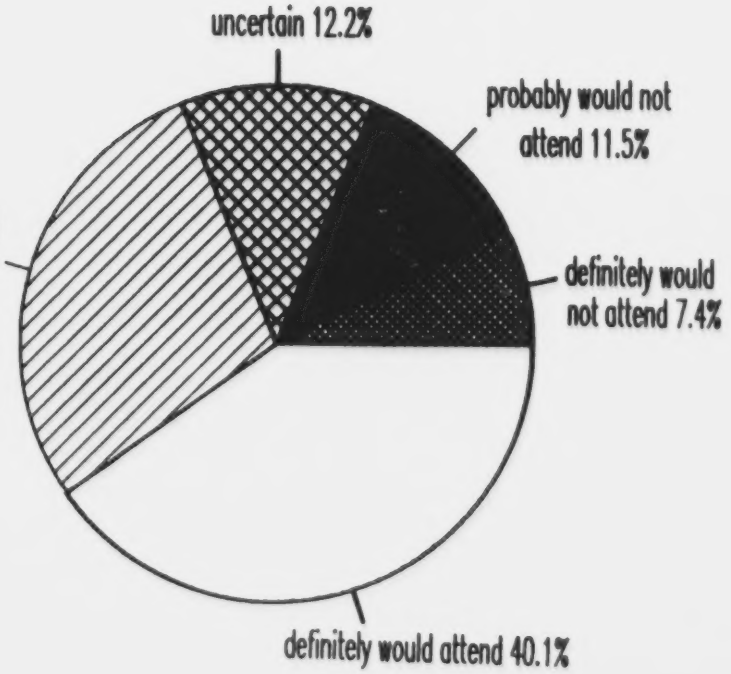
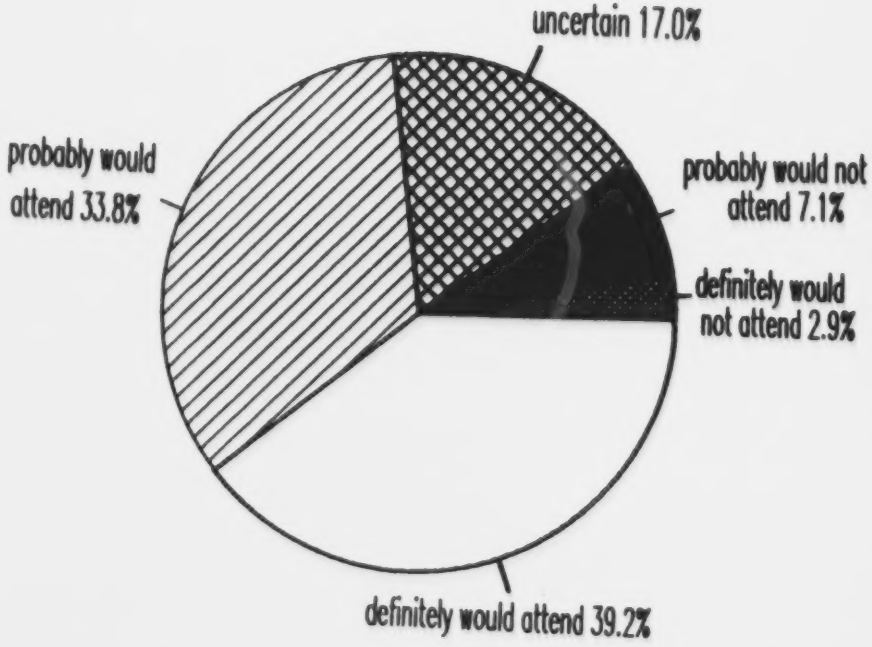


Figure 7

LIKELIHOOD OF RE-ATTENDING COMMUNITY COLLEGE


uncertain 12.2%
probably would not attend 11.5%
probably would attend 28.8%
definitely would not attend 7.4%
definitely would attend 40.1%

LIKELIHOOD OF RE-ATTENDING STATE UNIVERSITY


uncertain 17.0%
probably would attend 33.8%
probably would not attend 7.1%
definitely would not attend 2.9%
definitely would attend 39.2%

budgeting time for studies. In general, students noted minor to moderate levels of difficulty with these and other typical experiences that occur upon transfer from a smaller to a larger institution. The survey also asked students to provide data on two issues of commonly expressed concern: loss of transfer credit hours and "transfer shock" as reflected in lower grade point averages earned at the university. According to their self-report of pertinent data, students did not experience major difficulty with either lost credit hours or "transfer shock;" community college transfers reported losing an average of one course (3.2 credit hours) in the transfer and articulation process, and approximately three-tenths of a grade point (on a 4.0 scale) during their first semester at the university.

Part Three: The results of part three of the study conducted at two of the six Regents universities were summarized into the issues of 1) comparative academic performance, 2) comparative academic progress, 3) comparative graduation rates, and 4) comparative persistence.

Overall, the academic performance of native university students and community college transfers was substantially the same. Community college transfers earned cumulative grade point averages somewhat lower than their native university counterparts during their first semesters after transfer, but they caught up each succeeding semester until their earned quite comparable GPA's. Similarly, native university and community college transfer students progressed toward degrees at essentially the same rates, each group averaging 13-14 credit hours per semester.

Figures 8 and 9 illustrate the striking comparability of the four study groups in these performance and progress measures.

However, native university students earned degrees at rates considerably higher than did community college transfers, and they persisted at their respective universities at much higher rates than transfers. The magnitude of the differences varied greatly at the two universities participating in part three of the study, but the result was substantiated at the two institutions.

This result -- that native university students graduated at rates substantially higher than those for community college transfers -- appeared paradoxical in light of the previously noted result that both university natives and community college transfers progressed toward degrees at almost identical rates (as measured by cumulative credit hours earned toward degrees at the university of residence). The result that native university students also persisted at higher rates than community college transfers explained, in part, the paradox. However, other data were available that suggested other possible explanations for this phenomenon: namely, that community college transfers appeared to be required to earn greater numbers of credit hours before qualifying for degrees than university natives. Nonetheless, the reasons for these results could not be provided by the present study at only two of the six state universities in Kansas.

Also, there was some evidence that, after an initial lag in the rate at which community college transfers earned degrees,

Figure 8

COMPARATIVE ACADEMIC PERFORMANCE

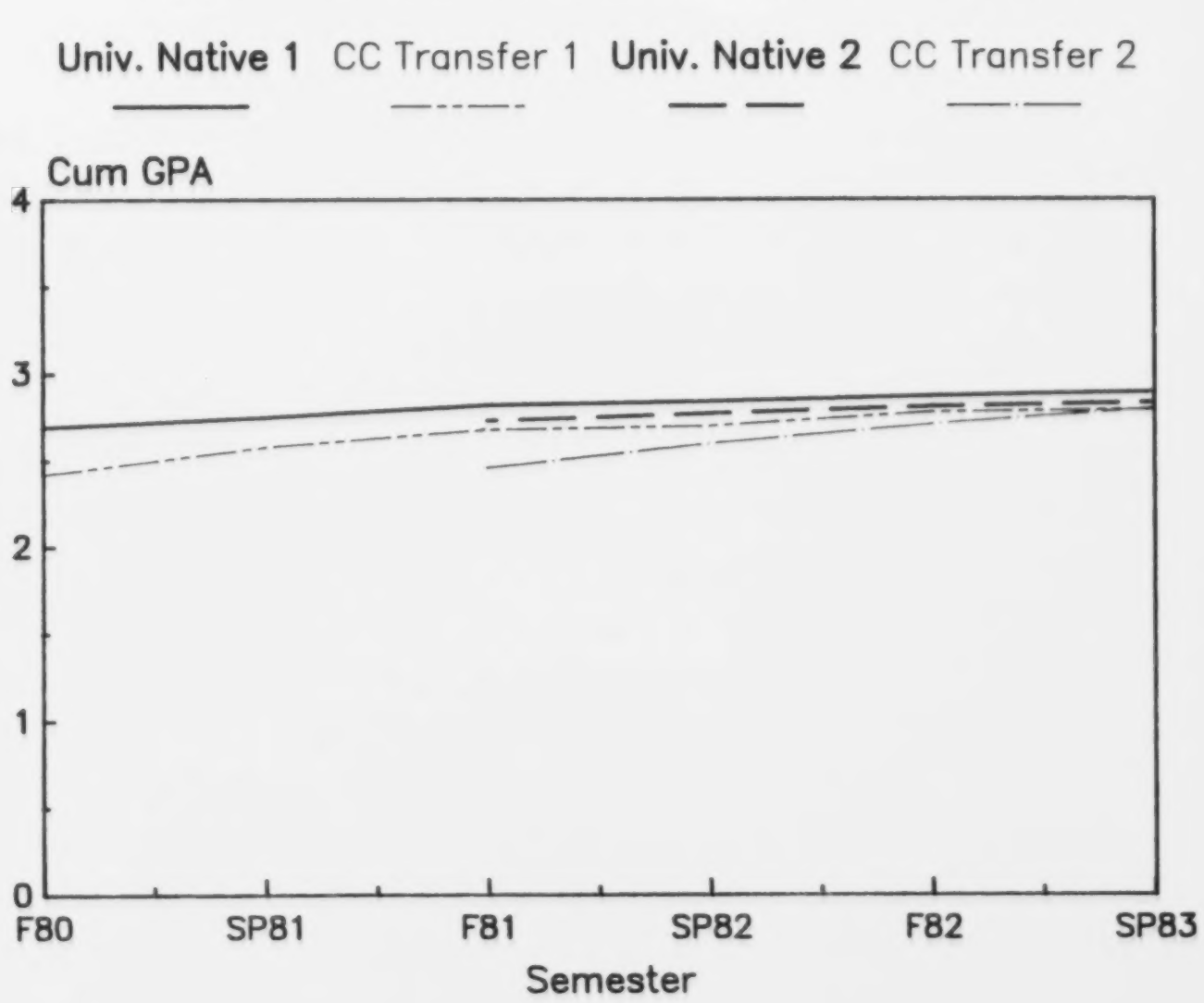
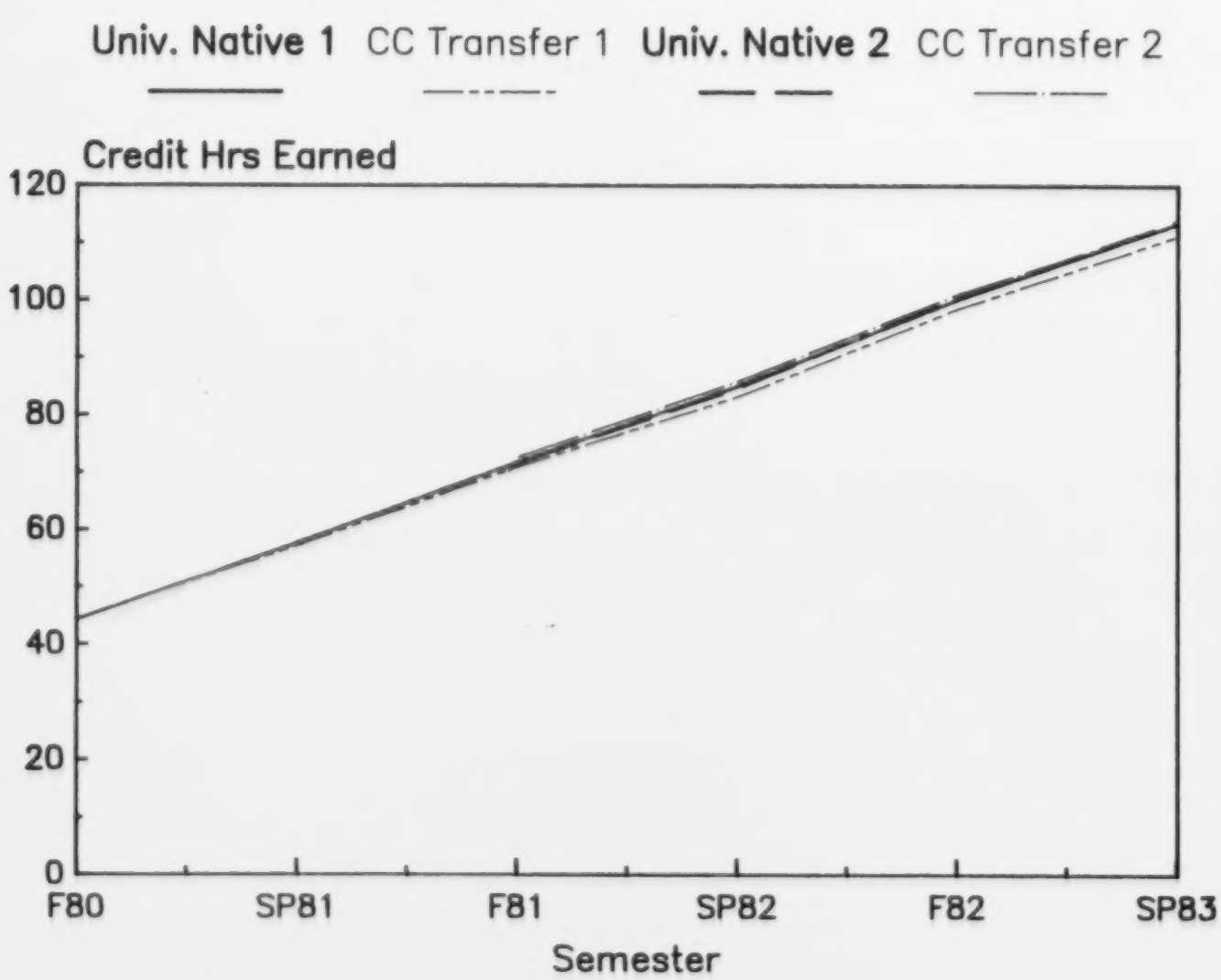


Figure 9

COMPARATIVE ACADEMIC PROGRESS



they began to earn degrees at rates similar to native university students in each subsequent semester. Similarly, there was some evidence that rates at which native university and community college transfers persisted were quite similar after their first year at the university. These rates are indicated by the slopes of the lines in Figures 10 and 11, and these suggest the tentative conclusions reached by the researchers involved in part three of the study.

Given the substantial limitations of the data and the paradoxical nature of some of the initial results, the researchers agreed that it was impossible to generalize the results of part three to the statewide level with any degree of confidence. Thus, the major conclusion of part three was that more research, designed specifically to answer the questions raised by this study, needed to be conducted. Specifically, the researchers concurred that given the limitations of the data, and particularly the participation of only two of the six state universities in part three of the study and the small number of students selected in some of the transfer study groups, no conclusions concerning such important issues as comparative academic performance, academic progress, and graduation and persistence rates could be generalized to the 25 colleges and universities in the state. They agreed that further research designed to eliminate as many of the limitations of the reported data, to validate preliminary results, to answer questions of causation concerning graduation and persistence rates, and to allow generalizability to all public instituions in the state

Figure 10

COMPARATIVE GRADUATION RATES

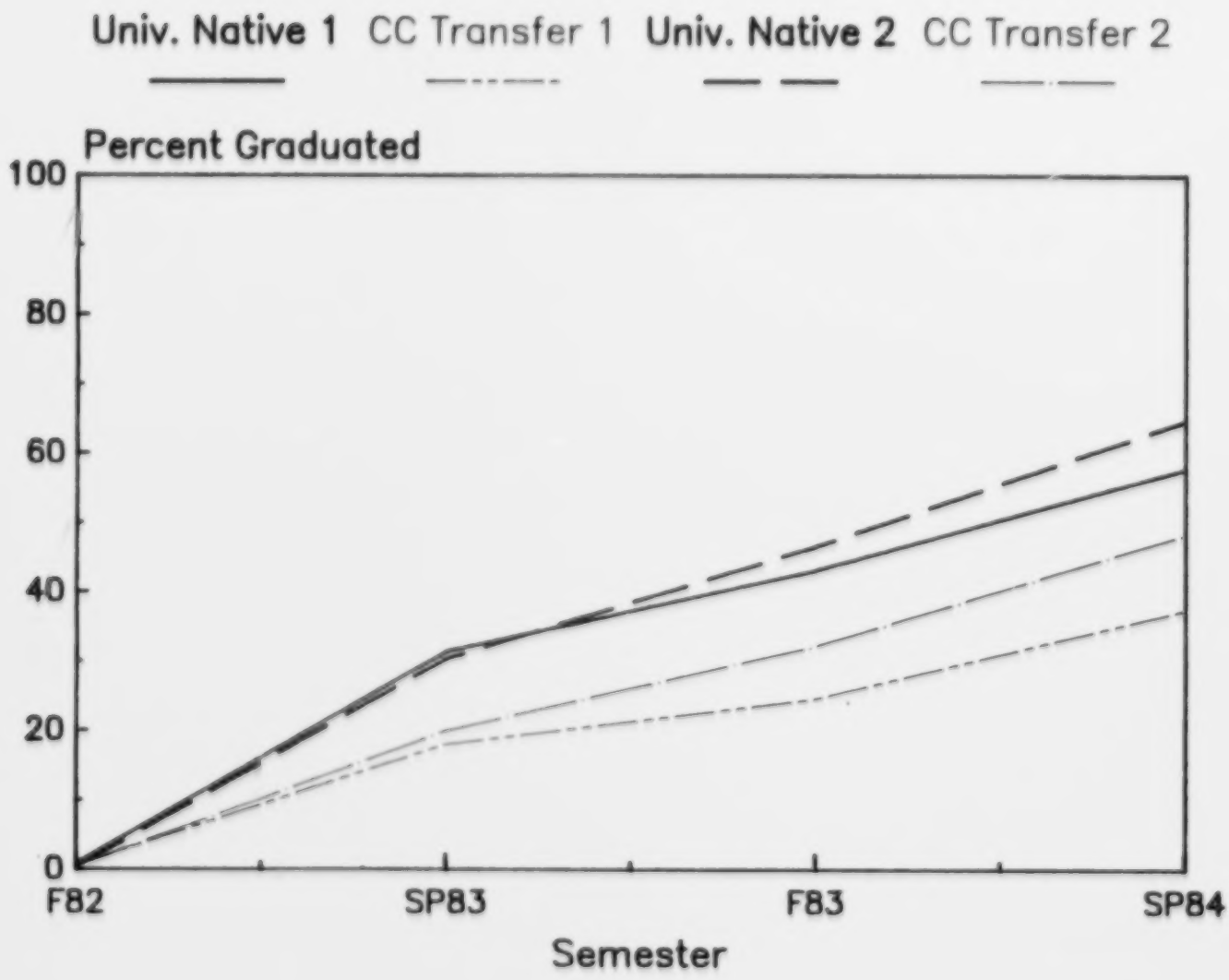
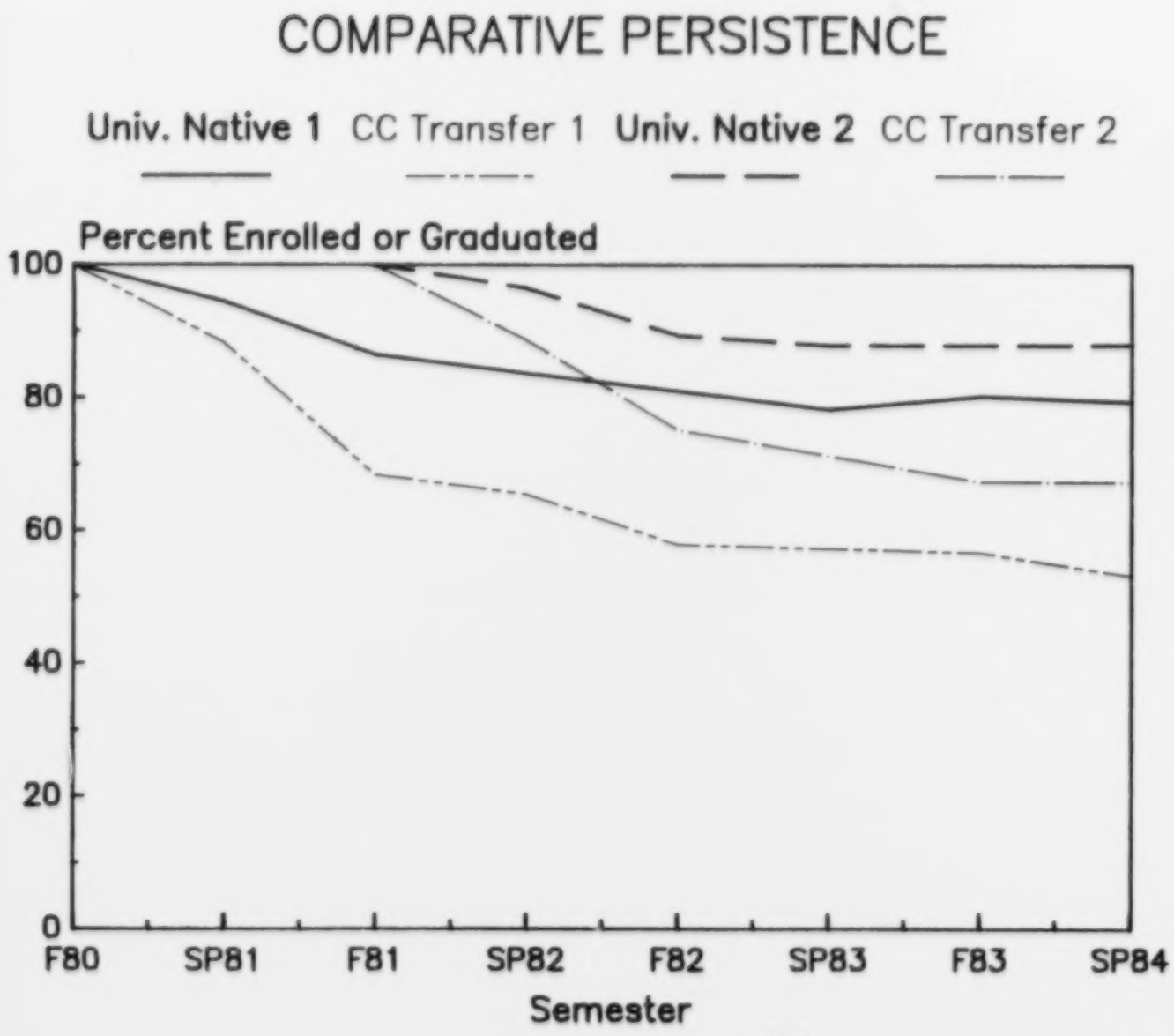


Figure 11


COMPARATIVE PERSISTENCE
Univ. Native 1
CC Transfer 1
Univ. Native 2
CC Transfer 2
Percent Enrolled or Graduated
100
80
60
40
20
0
F80
SP81
F81
SP82
F82
SP83
F83
SP84
Semester

needed to be designed and undertaken by the research group. Suggestions for further research are detailed in the following section.

Agenda for Future Research

The study as initially conducted provided substantive answers to some of the original research questions, though it also raised as many questions to be answered by future research. The following represents and agenda for future research that is currently being developed by the original sponsors of this research project and by the research group itself.

First on the agenda is the improvement of the current study by completion of missing or insufficient data that has thus far limited the results of the study. Specifically, in part one, reports need to be generated for fall 1984 and 1985 semesters to provide more complete historical comparisons and to confirm or deny noted preliminary trends. Part two can be made more complete and descriptive by further disaggregation and analysis of existing survey data to discriminate key variables.

However, the principal research agenda concerns completion, validation and extension of part three of the study. In specific, future efforts might follow the original study groups for at least one additional year to determine if community college transfers simply took longer to graduate and would graduate at rates more comparable to native university students if given more time to do so. Part three might be replicated in some manner at the other four state universities, either in

future semesters when sufficient historical data becomes available on the data bases of these institutions, or by some equivalent manual process. In either case, completing part three of the study in some form at the four remaining state universities remains necessary in order to generalize the results to the state system.

The initial results of part three also suggested revisions to improve the design of the study. Such revisions would include redefining the study groups to insure sufficient numbers of students are selected into each, particularly the community college transfer groups, and controlling for differences in ACT scores, high school rank, or community college or university GPA.

The results of part three virtually demand further research to answer the most pressing question post by the initial results: why do community college transfer students apparently graduate and persist at substantially lower rates than their native university counterparts? Replicating a revised design that included additional study groups, including native university students upon first entry into the university and transfers from other private and public colleges and universities, would determine if the sizable first-year attrition of community college transfers was related to their attendance at the community college or simply to the fact that students from any background sustain similar attrition during their first year at a state university. In turn, the effect that first-year attrition has on graduation rates can be determined.

Finally, the ambiguous and provocative initial results of part three suggest that research be conducted at different levels of analysis to answer more discrete questions of causation and motivation. Analysis of selected student records combined with student interviews could pinpoint specific programs of study, changes in majors, selected courses, departmental requirements, attendance patterns, or other academic or demographic characteristics that may be responsible for community college transfers' graduating at lower rates than university natives. Such analysis could determine if community college students are simply less certain about their educational and career objectives, and therefore less likely to complete them. In any case, it is clear that the agenda for future research includes more discrete analysis of such data as student transcripts and other admissions and records material to provide explanations for the apparent results of part three.

Implications

In discussing the importance and implications of this statewide research on community college transfers in Kansas, it is necessary to remember its origins. As described earlier, this study was conceived and initiated as a result of a previous, smaller-scale, cooperative research effort between two institutions. The perception that these initial JCCC/KU research efforts led to valuable cooperative relationships in several areas not limited to research subsequently motivated its acceptance and extension statewide. Similarly, a principal

result of this positive experience is the establishment of a context and a vehicle for future research and other cooperative ventures.

The fact that this research project has provided information perceived to be valuable by both community college and university leaders and has indicated a potentially serious problem in articulation among the two-year and four-year public institutions in the state has already resulted in commitments to continue the research -- even prior to publication of the final report. The presidents of the community colleges have already agreed to sponsor and provide similar levels of financial support for the extension and development of this and related research. The universities' leadership has indicated a similar commitment, and the details of how to implement the agenda for future research are anticipated to be worked out in the next few months. The results of these future studies must be extremely valuable to academic administrators as they attempt to solve identified problems in articulation among the public institutions of Kansas.

These same academic leaders have already begun to use the initial results of this research in seeking solutions to common problems of mutual interest. Again, this cooperative research effort began as an exercise in mutual self-interest. It continues to thrive and generate related initiatives for the same motivation. Much has been learned about the process of developing consensus for, designing and implementing cooperative projects. In turn, these efforts have become more sophisticated as the process itself reveals opportunities for institutions to pursue their mutual self-interests cooperatively.

Appendix

KANSAS COMMUNITY COLLEGE/UNIVERSITY STUDENT FOLLOW-UP

Dear Student:

As a former student of a Kansas community college and a current student at a state university in Kansas, you can provide us with valuable insight into the experience of moving from a community college to a state university.

We very much appreciate your help in answering the following questions. Your answers will help the public institutions in the state to better meet your needs and those of future students.

Please return the survey by November 19, 1984, using the enclosed business reply envelope. All responses will be kept strictly confidential.

If you have any questions or concerns, please call or write:

Office of Institutional Research
Johnson County Community College
12345 College at Quivira
Overland Park, Kansas 66210-1299
(913) 888-8500 ext. 3441

Please identify the institutions that you have attended:

A. The state university in which you are currently enrolled: _____

B. The Kansas community college last attended before transfer to the university: _____

Please answer all of the following questions concerning these two institutions that you have listed.

Directions: Students sometimes experience problems in transferring from a community college to a larger university. Please rate the degree of ease or difficulty you experienced dealing with each of the following circumstances ***during your first semester at the state university*** after transferring from a Kansas community college. Circle one response for each circumstance.

		Very Difficult	Difficult	Neither Difficult Nor Easy	Easy	Very Easy	Not Applicable
1a.	Finding a place to live	1	2	3	4	5	6
b.	Keeping up with class assignments	1	2	3	4	5	6
c.	Keeping in touch with family and friends	1	2	3	4	5	6
d.	Locating necessary university services	1	2	3	4	5	6
e.	Getting the classes you needed or wanted to take	1	2	3	4	5	6
f.	Making new friends	1	2	3	4	5	6
g.	Understanding lectures	1	2	3	4	5	6
h.	Not having necessary study skills	1	2	3	4	5	6
i.	Adapting to change in social climate	1	2	3	4	5	6
j.	Finding a job to help with expenses	1	2	3	4	5	6
k.	Getting good academic advising	1	2	3	4	5	6
l.	Getting help with classes from instructors or professors	1	2	3	4	5	6
m.	Paying for tuition, books and other educational expenses	1	2	3	4	5	6
n.	Completing the enrollment process	1	2	3	4	5	6
o.	Getting transfer credit hours accepted	1	2	3	4	5	6
p.	Getting around the campus	1	2	3	4	5	6
q.	Getting necessary transportation to and from campus	1	2	3	4	5	6
r.	Adjusting to large classes	1	2	3	4	5	6
s.	Arranging for financial aid	1	2	3	4	5	6
t.	Knowing who to go to for help	1	2	3	4	5	6
u.	Budgeting time for studies and social life	1	2	3	4	5	6
v.	Budgeting time for studies, work, and family responsibilities	1	2	3	4	5	6
w.	Understanding assignments	1	2	3	4	5	6
x.	Keeping grades up	1	2	3	4	5	6
y.	Other, please list: _____	1	2	3	4	5	6

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Directions: Please rate your level of satisfaction with each of the following aspects of your college experience **at the Kansas community college that you attended.** Circle one response for each aspect.

		Very Dissatisfied	Dissatisfied	Neither Satisfied Nor Dissatisfied	Satisfied	Very Satisfied	Not Applicable
2a.	Quality of instruction	1	2	3	4	5	6
b.	Variety of courses	1	2	3	4	5	6
c.	Rigor of instruction	1	2	3	4	5	6
d.	Student activities	1	2	3	4	5	6
e.	Library services	1	2	3	4	5	6
f.	Facilities	1	2	3	4	5	6
g.	Equipment	1	2	3	4	5	6
h.	Classes scheduled at convenient times	1	2	3	4	5	6
i.	Helpfulness of faculty	1	2	3	4	5	6
j.	Helpfulness of support staff (secretaries, librarians, security...)	1	2	3	4	5	6
k.	Academic advising	1	2	3	4	5	6
l.	Job placement service	1	2	3	4	5	6
m.	Counseling services	1	2	3	4	5	6
n.	Registration process	1	2	3	4	5	6
o.	Availability of scholarship and financial aid	1	2	3	4	5	6
p.	Qualifications of faculty	1	2	3	4	5	6
q.	Size and atmosphere	1	2	3	4	5	6
r.	Social life	1	2	3	4	5	6
s.	Experiences with other students	1	2	3	4	5	6
t.	Food service	1	2	3	4	5	6
u.	Bookstore services	1	2	3	4	5	6
v.	Health services	1	2	3	4	5	6
w.	On campus housing	1	2	3	4	5	6
x.	Overall preparation for the university	1	2	3	4	5	6

Directions: Please rate your level of satisfaction with each of the following aspects of your college experience **at the state university that you currently attend.** Circle one response for each aspect.

3a.	Quality of instruction	1	2	3	4	5	6
b.	Variety of courses offered	1	2	3	4	5	6
c.	Rigor of instruction	1	2	3	4	5	6
d.	Student activities	1	2	3	4	5	6
e.	Library services	1	2	3	4	5	6
f.	Facilities	1	2	3	4	5	6
g.	Equipment	1	2	3	4	5	6
h.	Classes scheduled at convenient times	1	2	3	4	5	6
i.	Helpfulness of faculty	1	2	3	4	5	6
j.	Helpfulness of support staff (secretaries, librarians, security...)	1	2	3	4	5	6
k.	Academic advising	1	2	3	4	5	6
l.	Job placement services	1	2	3	4	5	6
m.	Counseling services	1	2	3	4	5	6
n.	Registration process	1	2	3	4	5	6
o.	Availability of scholarships and financial aid	1	2	3	4	5	6
p.	Qualifications of faculty	1	2	3	4	5	6
q.	Size and atmosphere	1	2	3	4	5	6
r.	Social life	1	2	3	4	5	6
s.	Experiences with other students	1	2	3	4	5	6
t.	Food service	1	2	3	4	5	6
u.	Bookstore services	1	2	3	4	5	6
v.	Health services	1	2	3	4	5	6
w.	On-campus housing	1	2	3	4	5	6
x.	Overall preparation for career or graduate school	1	2	3	4	5	6

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Directions: For the following questions, circle the number or letter that corresponds to your response for each question.

		Yes	No
4.	When did you attend credit classes at the community college?		
	a. while you were in high school?	1	2
	b. during a summer semester?	1	2
	c. during a fall or spring semester sometime after high school graduation?	1	2
5.	Was the community college your "first choice" educational institution at the time you enrolled? (If *No*, please specify your "first choice" institution at that time) _____	1	2
6.	Was the state university your "first choice" transfer institution? (If No, please specify your "first choice" transfer institution at that time) _____	1	2
7.	Did you complete as many credit hours at the community college as you had originally intended before transferring to the state university?	1	2

8. If you were to start your college career over, how likely is it that you would attend the Kansas community college that you attended?
   a. Definitely would attend
   b. Probably would attend
   c. Uncertain
   d. Probably wouldn't attend
   e. Definitely wouldn't attend

9. If you were to start your college career over, how likely is it that you would attend the state university that you currently attend?
   a. Definitely would attend
   b. Probably would attend
   c. Uncertain
   d. Probably wouldn't attend
   e. Definitely wouldn't attend

Directions: Please fill in the blanks with the requested information. (Estimate answers to those questions for which you cannot provide exact information.)

10 a. Year of high school graduation: _____
   b. Name of high school: _____
   c. Location (city/state): _____

11 a. Semester and year of *first* enrollment at the community college: _____
   b. Number of semesters attended at the community college: _____
   c. Number of credit hours completed at the community college: _____
   d. Cumulative GPA earned at the community college: _____

12 a. Semester and year of *first* enrollment at the state university: _____
   b. GPA earned first semester at the state university: _____
   c. Number of semesters (including current semester) completed at the state university: _____
   d. Number of credit hours completed at the state university (*not* including current semester): _____
   e. Most recent cumulative GPA earned at the state university: _____

13. Number of credit hours currently enrolled at the state university this semester: _____

14 a. Number of credit hours transferred to the state university from the community college: _____
   b. Number of credit hours transferred to the state university from other colleges: _____

15. Age: _____ years 16. Sex: ☐ male; ☐ female

17. School/college currently enrolled in at this state university (circle only one)

a. Liberal Arts & Sciences	h. Journalism	p. Social Welfare
b. Business	i. Allied Health/Health Professions	q. Continuing Education
c. Education	j. Nursing	r. Don't Know
d. Engineering	k. Pharmacy	s. Not assigned to any school
e. Fine Arts	l. Law	t. More than one school
f. Technology	m. Home Economics	u. Other, please specify
g. Agriculture	n. University College	_____
	o. Architecture	

18. Which of the following categories best describes your intended choice of careers? Circle ***only one*** career category.
    a. Advanced degree professions (lawyer, physician, dentist, etc.)
    b. Allied health fields (nurse, dental hygienist or assistant, medical technician, physical or speech therapist, etc.)
    c. Applied arts (artist, writer, musician, actor, designer, etc.)
    d. Business operations, management (accounting, marketing, finance, etc.)
    e. Office, clerical occupations (secretary, bookkeeper, paralegal, teller, etc.)
    f. Sales (insurance, retail sales, real estate, etc.)
    g. Social Services (teacher, social or recreation worker, corrections or law enforcement officer, etc.)
    h. Technologies (engineer, computer programmer, draftsman, laboratory technician, etc.)
    i. Trades and crafts (construction worker, mechanic, production supervisor, factory or farm worker, etc.)
    j. Other (Please specify) _____
    k. Don't know

19. Which is the highest degree you plan to complete?
    a. associate's degree
    b. bachelor's degree
    c. master's degree
    d. doctorate
    e. professional degree (law, medicine, etc.)
    f. I don't plan to earn a degree

20. Please make any additional comments upon your experiences at the Kansas community college or state university, and offer suggestions that might help the institutions serve their students more effectively.

THANKS FOR YOUR HELP!

ERIC CLEARINGHOUSE
FOR JUNIOR COLLEGES
DEC 2 0 1985